Health Effects of Air Pollution*

Expanded oil refineries will emit more sooty air pollution with particulate matter smaller than 2.5 micrometers (PM-2.5), which is especially harmful to human health. These tiny particles can trigger inflammation-related health effects throughout the body.

**Cardiovascular System**
A primary consequence of air pollution is arterial inflammation and narrowing. Blood pressure increases within minutes of exposure, heightening rates of heart attack and stroke. Community mortality rates remain elevated for as long as 30 days after exposure. Between 1,000 and 2,000 Utahns die prematurely every year due to air pollution.

**Brain**
Brain inflammation caused by air pollution is associated with lower intelligence, poor motor function, attention deficits and behavioral problems in children, decreased cognition in adults, higher rates of stroke, multiple sclerosis, autism, and Parkinson's disease.

**Lungs**
Air pollution causes increased hospitalizations and deaths from respiratory diseases. It permanently inhibits lung growth in children, and even brief exposure to ozone and particulate matter reduces lung function in young, healthy adults. Air pollution exacerbates virtually all pulmonary diseases and can cause lung cancer.

**Fetal Development**
Pregnant women exposed to higher levels of air pollution can give birth to babies with significantly more chromosomal aberrations. Exposure to even brief episodes of pollution at critical stages of embryo development can cause increased likelihood of multiple chronic diseases. Air pollution is associated with sperm damage, increases in male infertility, and also the number of miscarried pregnancies.

**Birth Outcomes**
Air pollution causes changes in the placenta, inhibiting blood transfer to the fetus. Pregnant women can have higher blood pressure. Incidences of premature birth and low birth weight syndrome increase, as does the number of newborns with smaller head circumference. Air pollution is associated with higher rates of neural tube and cardiac birth defects.

**Other Chronic Diseases**
Air pollution accelerates the aging process and is associated with higher rates of breast cancer, childhood leukemia, diabetes, immune suppression, bacterial infections, lupus, juvenile arthritis, infant mortality, sleep apnea, obesity, and suicide.

*Summarized from data provided by Utah Physicians for Healthy Environment. Visit www.uphe.org for more information.